

# Adapting to climate change through Smart Growth and LEED-ND

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## Introduction

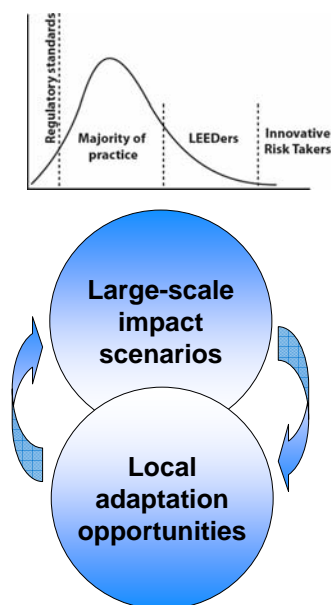
Climate and land use change are global challenges and ubiquitous drivers of environmental change. Impact assessments frequently show that interactions between these processes can create serious challenges for aquatic ecosystems and water resources.

## LEED for Neighborhood Development

The U.S. Green Building Council (USGBC) is a non-profit organization working to promote sustainable, profitable, and healthy built environment. USGBC develops and promotes voluntary Leadership in Energy and Environmental Design (LEED) standards. USGBC is working with the Congress for New Urbanism (CNU) and the Natural Resources Defense Council (NRDC) to develop the first national standard for neighborhood design known as LEED for Neighborhood Developments (LEED-ND). LEED-ND will emphasize Smart Growth aspects and incorporate a variety of the most important green building practices. Draft LEED-ND standards were released in September 2005.

## Land use and climate adaptation

The vulnerability of human social and economic systems to climate change is partially determined by land use decisions. Local and regional land use patterns and processes can exacerbate or ameliorate climate impacts. This project identifies opportunities to avoid maladaptation and promote robust, adaptive alternative approaches to neighborhood development. *The goal is to identify practical opportunities to reduce vulnerability to climate change.*



## Approach

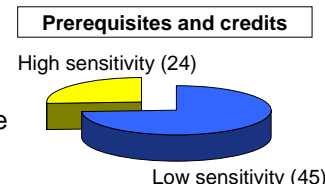
We are conducting a systematic assessment of the proposed LEED-ND standards. We are evaluating the potential for climate to influence the effectiveness or efficiency of each LEED-ND prerequisite (required elements) and credit (optional elements).

LEED-ND Rating System - Preliminary Draft, September 6, 2005. The table lists various prerequisites and credits, their points, and their percentage of total points. A summary box indicates: Certified: 48-54 points (50% of total points), Silver: 55-60 points (60% of total points), Gold: 61-66 points (65% of total points), Platinum: 67-72 points (70% of total points).

Learn more:  
[www.usgbc.org](http://www.usgbc.org)

## Preliminary results

A preliminary analysis shows that 5 prerequisites and 19 credits may be highly sensitive to climate change.



## Sustainable choices

Developers and planners have opportunities to meet and sustain neighborhood performance goals by avoiding maladaptive choices and considering adaptive alternates for:

- ✓ Restoration/conservation of habitat or wetlands
- ✓ Maintenance/reduction stormwater runoff rates
- ✓ Stormwater treatment
- ✓ Heat island reduction

## Research products

Guidance for potential LEED-ND users, including municipal planners and neighborhood developers.

